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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,579	11/21/2003	Yuji Sezai	110537.01	8556
25944	7590	04/07/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			NGUYEN, TUYEN T	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Office Action Summary**

Application No.

10/717,579

Applicant(s)

SEZAI ET AL.

Examiner

TUYEN T. NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/944,590.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/21/2003</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hisano [US 3,371,301].

Hisano disclose a communication transformer having a magnetic core structure, wherein the magnetic core structure comprising two core elements [1, 1', figures 2 and 7], each core element comprising:

- a bottom plate [figures 2 and 7];
- a central leg [3]; and
- an out leg [figures 2 and 7] rising from the bottom plate surrounding at least two side of the central leg in the first direction separated by a predetermined space.

wherein the magnetic core structure comprises 51.75-53.35 mol% Fe<sub>2</sub>O<sub>3</sub>, 20-25.75 mol% ZnO and the remainder is Mn, which is 22.5-27.4 mol%.

The taught ranges overlap the claimed ranges. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103, *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). Since the taught composition overlaps the claimed compositions, one of ordinary skill in the art would

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expect the taught composition to inherently have a total harmonic distortion at 5 kHz which overlaps the claimed range, absent any showing to the contrary. The reference suggests the claimed cores and compositions.

The specific use of the communication transformer in an xDSL circuit would have been an obvious design consideration based on the intended applications/environment.

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hisano in view of Matsumura [JP 55-113308].

Hisano disclose a communication transformer having a magnetic core structure, wherein the magnetic core structure comprising two core elements [1, 1', figures 2 and 7], each core element comprising:

- a bottom plate [figures 2 and 7];
- a central leg [3]; and
- an outer leg [figures 2 and 7] rising from the bottom plate and surrounding at least two side of the central leg in the first direction separated by a predetermined space.

wherein the magnetic core structure comprises 51.75-53.35 mol%  $\text{Fe}_2\text{O}_3$ , 20-25.75 mol% ZnO and the remainder is Mn, which is 22.5-27.4 mol%.

The taught ranges overlap the claimed ranges. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103, *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). Since the taught composition overlaps the claimed compositions, one of ordinary skill in the art would expect the taught composition to inherently have a total harmonic distortion at 5 kHz which

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overlaps the claimed range, absent any showing to the contrary. The reference suggests the claimed cores and compositions.

The specific use of the communication transformer in an xDSL circuit would have been an obvious design consideration based on the intended applications/environment.

Hisano discloses the instant claimed invention except for the specific gaps.

Matsumura discloses a magnetic core structure for an induction device having two core elements [A, B], each core element comprising:

- bottom plate [1];
- a central leg [3];
- an outer leg [2] rising from the bottom plate and surrounding at least two side of the central leg in the first direction separated by a predetermined space;
- gaps [G1, G2] formed between the central legs and the outer legs of the core elements.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the gaps design of Matsumura in the core structure of Hisano for the purpose of controlling the magnetic flux.

The specific height/space/length of the gaps would have been an obvious design consideration for the purpose of adjusting the magnetic flux.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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- Meuche et al. [US 6,696,913] ; Kuroshima et al. [US 6,617,948] ; Hoffman et al. [US 6,501,362] ; Holdahl et al. [US 6,483,412] ; Inoue [US 6,423,243]; Inoue et al. [US 6,217,789] ; Usui et al. [US 5,912,609] and Heringer et al. [US 5,489,884].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN T. NGUYEN whose telephone number is 571-272-1996. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ELVIN ENAD can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTN *TTN*

*Tuyen T. Nguyen*